

AMENDMENT
U.S. Appln. No. 09/559,595

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A cable comprising at least one optical fiber and at least one covering layer comprising (a) a thermoplastic polymer or a photopolymerizable resin and (b) a composite material, wherein:

 said composite material is in the form of particles, and said particles have a size of nanometer order and include an organic compound and an inorganic compound;

 said inorganic compound (i) is graphite or an inorganic oxide, (ii) has a layered structure, and (iii) has been treated to allow said organic compound to be inserted between the layers of said inorganic compound; and

 said organic compound is selected from the group consisting of polymers, monomers, and oligomers, and is inserted between the layers of said inorganic compound.

Claim 2 (canceled).

Claim 3 (previously presented): A cable according to claim 1, in which said inorganic oxide is selected from the group consisting of a metal oxide of layered structure and a silicate of layered structure.

Claim 4 (previously presented): A cable according to claim 3, in which said silicate of layered structure is selected from the group consisting of mica and clay.

Claim 5 (previously presented): A cable according to claim 4, in which said clay is selected from the group consisting of talc, vermiculite, kaolinite, smectite, and mixtures thereof.

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Claim 6 (previously presented): A cable according to claim 5, in which said smectite is selected from the group consisting of montmorillonite, bentonite, beidellite, nontronite, saponite, hectorite, and mixtures thereof.

Claim 7 (previously presented): A cable according to claim 6, in which said smectite is selected from the group consisting of montmorillonite and bentonite.

Claim 8 (canceled).

Claim 9 (previously presented): A cable according to claim 1, in which said organic compound is a polymer selected from the group consisting of polyesters, polyethers, polyvinyl ethers, polyurethanes, polyurethane acrylates, maleates, fumarates, polythiols, polyenes, and copolymers and mixtures thereof.

Claim 10 (previously presented): A cable according to claim 1, in which said organic compound is a polymer selected from the group consisting of polyolefins, polybutylene-terephthalates, vinyl polymers, elastomers, silicones, and copolymers and mixtures thereof.

Claim 11 (previously presented): A cable according to claim 1, in which said organic compound is a polymer selected from the group consisting of epoxy resins, polyesters, polyamides, polyimides, polyetherimides, polyamidimides, polyurethanes, silicones, and mixtures thereof.

Claim 12 (currently amended): A cable according to any one of claims 1, 3-7 and 9-11, comprising an optical fiber surrounded by a protective coating including at least one layer constituted essentially by said covering material thermoplastic polymer or photopolymerizable resin (a) and said composite material (b).

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Claim 13 (currently amended): A cable according to any one of claims 1, 3-7 and 9-11, including a plurality of optical fibers and an outer sheath including at least one layer constituted essentially by said ~~covering material~~ thermoplastic polymer or photopolymerizable resin (a) and said composite material (b).

Claim 14 (currently amended): A cable according to any one of claims 1, 3-7 and 9-11, comprising a bundle of optical fibers and an insulating covering having at least one layer constituted essentially by said ~~covering material~~ thermoplastic polymer or photopolymerizable resin (a) and said composite material (b).

Claim 15 (currently amended): A method of manufacturing a composite material for a cable according to any one of claims 1, 3-7, and 9-11, wherein the composite material is made by the following steps:

treating said inorganic compound, which is in the form of particles having an initial size of micron order, ~~and said inorganic compound particles are treated~~ with an agent so as to ensure that said inorganic compound particles are compatible with said organic compound; and

mixing said treated inorganic compound ~~is mixed~~ with said organic compound at a temperature higher than the softening temperature or melting temperature of said organic compound; and, thereby obtaining said composite material ~~is obtained~~,

wherein said composite material is in the form of particles, said composite material particles have a size of nanometer order, and said composite material particles comprise said organic compound inserted between the layers of said inorganic compound.

Claim 16 (previously presented): A method according to claim 15, in which said inorganic compound is a clay and said compatibility agent is selected from the group consisting of quaternary ammonium salts, polyethylene oxides, and phosphorous-containing derivatives.